

## BRIEFER ARTICLES.

### NOTES OF TRAVEL. VI.<sup>1</sup>

#### THE BOTANICAL INSTITUTE OF NETHERLANDS INDIA.

THE gardens of Buitenzorg, Java, have been described so often that their name should by this time be familiar to every American botanist. The institution has grown so rapidly in the last few years, however, that a short description of the improvements made may be of interest to any one who expects to visit Java, and to all who are interested in the development of tropical botany. Although the Institute bears the name "botanical," it has many decided agricultural features, and on account of its various divisions and the nature of the subjects under investigation would be called by many Americans a most unusually well equipped station.

The impression made upon the writer in 1896, during an eight months stay in these gardens, was that they offered unrivaled opportunities for study, a wealth of interesting material, and surroundings full of the most interesting oriental sights. After three years' absence, much of which time has been spent in a study of other botanical gardens and institutions, I find that Buitenzorg still possesses the charm and offers even greater opportunities than in 1896. During the last three years, under Dr. Treub's excellent management, five new buildings have been erected. They consist of a double laboratory in which tobacco and coffee are investigated, a very comfortable pharmaceutical laboratory, a new library building which now holds the most complete collection of botanical works in the tropics, a luxuriously appointed office building, and a very pretty tropical bungalow for Dr. Treub. The construction of the laboratories is very substantial. They are all one story buildings with concrete floors, projecting tile roofs, and numerous large windows which in this latitude let in a flood of light and require white shades.

Tables, desks, cases, and shelves are kept scrupulously clean and neat, and in this regard are in strong contrast with most tropical institutes, in which a musty smell pervades everything. Dr. Treub has given in the first number of his *Bulletin de l'Institut Botanique de Buitenzorg*, published in December of 1898, an excellent sketch of the gardens and

<sup>1</sup> No. 5 of this series was lost in transit.—ED.

their personnel. He has included also a description of the publications of the Institute, an estimate of the necessary expenses of a stay at the gardens, and the cost of the sea voyage from Europe. This first number of the *Bulletin* will be sent to any botanist who writes for it with the idea of preparing for a stay at the gardens.

The new quarter, to which Mr. Wigman, the head gardener, had transferred nearly all of the climbing plants, was in 1896, like all such newly planted ground, unsatisfactory to look at. It has now grown until it is an attractive portion of the gardens, and the new avenue of canary trees in it, which was planted to rival the old avenue (for which the gardens are famous in the eyes of travelers), is already very handsome, with its regularly rounded tree tops and light gray trunks. A water-garden which had just been laid out in 1896 is now indistinguishable from older parts of the garden, and the fern quarter and collection of *Pandanus*, of which photographs have been so often published, have grown more interesting with their coatings of epiphytic algae. The small nursery, which was large enough three years ago to reproduce all the plants needed in the gardens, has been more than trebled in size, and packages of seeds and cases of plants are being sent all over the archipelago (2294 packages and cases in 1897), as well as in exchange with all the principal botanic gardens of the world.

Native labor is being utilized in a new printing office in the gardens, where all small forms and even scientific periodicals are printed, the compositors being Javanese who do not understand a word of what they set up. The work is done very slowly, and the proof reader's patience is taxed to the utmost, but because of the low price of labor and the inconvenience of having the work done in Batavia or Amsterdam is very great, the office is a great convenience.

I had the pleasure of accompanying Dr. Treub and Mr. Wigman in one of their early morning strolls, in the course of which they bargained with two neatly dressed Javanese land owners for some paddy fields of which to construct experimental plats. In response to Dr. Treub's and Mr. Wigman's inquiries the Javanese replied with respectful salaams and remained sitting on their heels as they would before a raja. These new plats which were purchased are to be under the supervision of a newly appointed specialist, whose acquaintance with Javanese vegetables and other native food plants will enable him to select and improve them, and to distribute information among the natives regarding the best methods of their culture.

The new laboratory for pharmaceutical research is a model of compactness and convenience. The library building, which was the generous gift of Mr. Janse, of Amsterdam, has now not only the increased library of the gardens but the considerable collections of books formerly belonging to the scientific society of Batavia. The removal of the library from the herbarium building gives Dr. Boerlage greater space for his rapidly growing collection, and the old building, formerly occupied as the pharmaceutical laboratory, is to be utilized for an exhibition of economic plant products.

A lively interest in the fruits of the island has been awakened among the planters, and a horticultural society with more than 300 members has been formed. The first exhibition of fruits, which was held in December last, was a great success, and the garden authorities hope through cooperation with members of the society to secure a collection of the best varieties of fruits, and by distributing grafts from these, to replace the inferior seedling kinds, which now furnish the fruit for the tables of the Europeans. A seedless doekoe (*Lansium domesticum*) has already been found, and other superior varieties are known to exist in the island. Almost everywhere in the tropics fruit trees are wild, and it is one of the curious observations which a traveler makes that little is done to improve fruits which are evidently capable of very great improvement. There are mangosteens which without selection are nearly or quite seedless, and yet Europeans choose to plant seeds instead of grafts, and still have a strange fear that a grafted tree will be a short-lived sickly thing and not repay for the extra trouble taken with it. The new horticultural society should do much to enlighten the planters and enable them to plant and breed better fruits, even in a country noted for its delicious pineapples and incomparable mangosteens.

There are doubtless many other lines along which the gardens at Buitenzorg have improved. The selection of sugar cane seedlings, the hybridizing of coffee, the establishment of a new zoological museum to be under the management of Dr. Konigsberger and to contain mounted specimens of all the many interesting animals and cases of the injurious and biologically interesting insects of the archipelago, were all propositions under consideration at the time of my short visit in January. I am thoroughly convinced that to any one who expects to make a thorough study of tropical plants a visit to this Botanical Institute will be of the greatest advantage. Its opportunities surpass those of any other in the world.—DAVID G. FAIRCHILD, *Department of Agriculture.*